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ABSTRACT

Some of the concern about educators' failures to build a strong educational foundation revolves around the idea of "professional" and its relationship to the concept of "malpractice." Educators usually claim that education is a profession of practice and thus ought to embody at least a generalized statement about professional ethics and behavior. However, much of education's rush to "world class" status is not built on reasonable research results, even as researchers and others continue to seek new research bases for education improvement. There are several ways to begin improving the current education system: (1) borrow ideas and innovations from other disciplines; (2) incorporate research results from education and other closely related fields; or (3) combine the first two approaches to improve the structure of education through borrowed innovations and also improve the internal mechanisms and technical core of education by incorporating research results from education and education-related disciplines. The paper focuses on the third option, identifying both externally and internally feasible ideas for improving professional practice. The paper also discusses the professor's role with a focus on the relationship between educational scholarship and practice. A description of Project STAR, a research-supported school-improvement effort that explored the effects of small class size on academic achievement in grades K-3 concludes the paper. The STAR data have potential for building a solid foundation for reinventing education. Improvement will be impeded if educators do not employ research results, evaluate various applications, and apply advances in the knowledge base. One table is included. Appendices contain information on the practitioner as professional educator, Getzels' (1979, 1985) problem categories, and one figure. (Contains 30 references.) (LMI)

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REINVENTING EDUCATION THROUGH SCHOOL IMPROVEMENT RESEARCH THAT HAS RESULTED IN STUDENT GAINS

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REINVENTING EDUCATION THROUGH SCHOOL-IMPROVEMENT RESEARCH THAT HAS RESULTED IN STUDENT GAINS *

Introduction

When building something substantial or important, people usually start with a solid, firm, strong foundation. A classic example of architects, engineers, and builders not heeding this axiom can be found in the gravity-defying tower of Pisa. Some education critics believe that, if it has not already fallen over, education is as close or closer to reaching the tipping point than is the famous Leaning Tower! The Leaning Tower of Pisa analogy is not far-fetched in American Education. for one reason or another, educators have not used much of the research available to them to build a solid foundation for educational improvement.

Numerous issues are involved in educators' failures to build a strong foundation for education's presumed cumulative effects. Some of the concern revolves around the idea of "professional" and its relationship to the idea of "malpractice." Three of the issues are:

Early education in America is not done as well as the research shows that it could be. For example, kindergarten (K) and even pre-K helps pupils prepare for school, but not all states require K and the federal Head Start program is not fully funded. This suggests some sordid scenarios.

1. Those in charge of education improvement do not know the substantial research and knowledge base (KB) relating to early intervention, early childhood education, etc. OR
2. Those in charge of education decisions do know the research and KB but for various reasons they do not use/apply it, OR
3. Those in charge do not work from a personal theory of practice that embodies a sense of improvement (using what is known), inquiring (finding problems and creative solutions), evaluating (answering the

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Portions of this paper are the same as Achilles et al. (1996d), "If we're rebuilding education, let's start with a firm foundation." Paper at the 1996 University Council for Educational Administration (UCEA) Convention, Louisville, KY, and Achilles (1996c).

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question "how are we doing in relation to what we should be doing?"--empirically testing the "is" against the normative "ought"), and growth (personally and professionally accepting challenges, taking risks, and advocating for doing right the right things). OR. OR. OR.

This discussion is rooted in the concept of educator as a professional. As the standard for "professional" we mean such things as having a) a KB that the person applies beneficially to help solve "people" or client problems; b) a method of inquiry to access, assess, and advance the KB; c) standards (or licensure) for admission to the profession and requirements for renewal; d) a specialized language to bring precision to the field, and e) some regulations/standards and a code of ethics to govern minimal levels of performance in the field. (See Appendix A for ideas about educator as professional). Perhaps the oldest code of ethics for professional conduct is medicine's Oath of Hippocrates (460-375 BC). [Some might think that the law of Hammurabi (ca 1955-1931 BC) governs lawyers]. In not using what educators know about education (e.g., see Glickman, 1991) severe critics of education may think that educators are guided by and prefer the Oath of Hypocrites as an ethical guideline.] Educators usually claim that education is a profession of practice (similar to medicine) and thus ought to embody at least points (a-e) in a generalized statement about professional ethics and behavior. Yet, the record shows that much of education's rush to "World Class" status is <u>not</u> built on reasonable research results, even while researchers and others continue to seek new research bases for education improvement.

<u>Primum non Nocere</u>

The first principle in a client-oriented code of ethical behavior is "primum non nocere" which is liberally translated as "at the very least, do (the client) no harm." Thus, a professional's base is "if you can't help. at least don't cause any harm." Pretty safe, one would suppose. Well, how many educators work in systems where pupils are <u>routinely</u> retained in grade? What are other examples of the conundrum? The main points in Glickman's (1991) article, "Pretending not to know what we know" are a quick starting place. Since 1991 there are others.

<u>Besides Primum non Nocere?</u>

Several issues call into question education's claim to be a profession. A profession has a knowledgebase (KB) and a method of inquiry to access, assess and advance the field. A knowledge base? A method of inquiry? <u>If education had its own KB, why do educators rush to try to make education fit on the Procrustean bed of the KB of other fields</u>? Many educators advocate "restructuring." Mitchell and Beach (1993) asked the key question, "If,

restructuring is the answer, what is the problem?"(p. 266). The lively qualitative/quantitative debate leaves unsettled just what is education's method of inquiry. [Achilles (1994a) has suggested that it might be Q^2 or "Qualiquantitative."] The struggle over standards/licensure such as NCATE's "Curriculum Guidelines for Educational Leadership," the CCSSO's "Interstate School Leaders Licensure Consortium (ISLLC) Standards, the AASA's General Professional Standards (Hoyle, Glass, & Oates, 1990), shows that at least educators (or some educator groups) are searching for professional status.

The Struggle for Personal Theory

In a profession, thoughtful scholar-practitioners advance the field through using and testing theories of practice that guide their work. In this process there is constant tension between the empirical (what is) and the normative (what should be). The notion of "professional" suggests that to improve practice, the practitioner will rely to some extent upon the application of important research in the field. In ethical practice, a professional not only uses the data in revising personal theories of practice, but also advocates the use of the data to advance the field, to improve the status of clients, and to urge that policies be built upon the data. Yet, without a clear acknowledgment of a KB, upon what will educators base their personal theories, assuming that they wish to build and use them? (Keedy and Achilles, In press). It is safe to say that all systems can use continuous repair if they intend to be continuously better, and American education is not exempt from this condition. The use and testing of personal theory complement solid research results as a framework for improvement.

Why Seek improvement?

Real improvement will only come when educators use what is known, evaluate it carefully, build upon it and continue a research agenda built upon this solid base. Some "good bets" that are not yet substantiated by research should be advanced as "venture capital" due to their potential to yield positive results, but the core of the improvement should be built on positive research results already available.

There are several ways to start improving the current education system. One way (Option A) is to advance education by considering ideas and innovations that have been developed in other institutions, such as in business or industry. This is to continue to march to other people's ideas and address what Getzels (1979) called "the presented problem." (See Appendix B). Some of these ideas have already made their way into the education literature (as distinct from the research), and many professors and others make a living peddling "projects" built on this stuff.

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A second way to improve the education system (Option B) is to incorporate into its operation those things that research has shown are likely to improve the outcomes of the education process and system. These "things" come from education (or related social science fields, such as psychology), and have a substantial research base.

A third option (called Option C) incorporates both options A and B above. In Option C, educators might try to improve the structure of education by using borrowed innovations and also work on improving the internal mechanisms and technical core of education by incorporating research results from education and education-related disciplines. In this paper, we are mostly interested in Option C, identifying both externally and internally feasible ideas for improvement of education.

The Role of the Professor

The three-part task of education described by the professor's role continues to be, generally, teaching, research, and service. If professors teach mainly in Option A they profess the introduction of things into education that have been developed outside of education and have been urged on education by non-educators. This is strange, indeed, especially since in this role professors are seen as of little influence (or value) in education improvement, by those outside of education. Professors are seen by others (e.g., business leaders, entrepreneurs) as little but "disseminators" whose function is to advertise and legitimate. (Isn't this a bit disgusting?) Listen to Ogawa's (1994) conclusions:

> *Role of academic actors.* We raise a third issue because it hits so close to home. It concerns the role that academic actors played in institutionalizing school-based management. Academic actors, as reported earlier, were not the chief institutional entrepreneurs. . . . As one interview respondent observed, the words of professors carry weight because they are backed by academic credentials.
>
> The relationship of educational scholarship to educational policy and practice has often been a point of concern and not a little contention between academics on the one side, and policymakers and practitioners on the other. Both sides, however, seem to agree that scholarship should have a substantive relationship to policy and practice. In the present instance, scholarship did not drive policy and practice, as some academics believe it should. Nor was it irrelevant, as many policymakers and practitioners believe it to be. Instead, it served the largely symbolic function of legitimating what institutional

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> entrepreneurs had shaped, which may strike at the legitimacy of educational research. (546-547, Emphasis added).

For example, professors continue to profess things like Total Quality Education (TQE), Site-Based Management (SBM),[1] restructuring generally, and ever-increasing expenditures on technology (etc.). These may help the infrastructure of education, but there is precious little evidence that such things have any appreciable impact on the technical core of education. Where are data that these things improve education outcomes, and most specifically, improve student outcomes in areas such as achievement or behavior, both of which are major concerns for educators?

Few professors deal with research emphases on things that are of education and seem to work for education (Option B). Unless professors will profess these Option B things, it is probable that few educators will know much about them and surely they won't do much about them. Thus, the technical core of education remains stagnant. In Option B we find, e. g.:

- retention in grade,
- class size in early primary grades,
- multi-aged grouping in classrooms,
- corporal punishment,
- grouping and tracking,
- etc.
- use of time, such as different scheduling and then different teaching methodologies to accompany scheduling changes,

Why don't professors emphasize Option B with the same interest that they work on "glitzy" Option A ideas? Why don't professors encourage their students to use the things that research has shown will improve student outcomes? Might Option B ideas provide a substantial base for restructuring since they emphasize the purpose of Education and have as their outcomes improvements in student learning?

Both business and education are fields of practice that rely on ideas from disciplines as the basis for their practice. Since the goals of each field differ, why would educators use procedures or ideas developed for business and not for education? (See Appendix C). What assures educators that even ideas from the same disciplines would be applied in the same way with the same results when the anticipated goals and outcomes of the fields of practice are different? (E.g., See Murnane and Levy, 1996).

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[1] The efficacy of SBM to raise student "outcomes" such as test scores continues to be questionable. See, e.g., Smylie, M. A., Lazarus, V. & Brownlee-Conyers, J. (1996, Fall). Instructional outcomes of school-based participative decision making. Educational Evaluation and Policy Analysis, 18 (3), 181-198.

Should professors be professing the results of Option B (research conducted in education and pertinent to education)? Should they be giving equal weight to Option B outcomes and to reviewing and popularizing Option A (ideas brought to education from the outside)? If the answer to this is "yes, then Option C seems to pertain.

Professors could provide information on research that has been shown to improve student outcomes, and to differentiate between activities to improve the technical core of education and ideas to strengthen the infrastructure and delivery of education.

If professors do not deal with Option B, is it because they believe that this is not part of the KB for educators? Is it because they do not see these research results as necessary to teach to prospective Education Administrators? Is it because they, themselves, do not know this research? Are they happy, as Ogawa's study seems to say, in being disseminators and handmaidens who come into the fray late (if at all) and write to legitimate the work of others?

If they know this Option B research, should they at least take a stand on it? Should they urge educators and others to recognize the research, have the technical skill to use this research, and urge the ethical practice of doing what research shows will work? Is the continuing absence of the KB of practices that have been shown to work in education (positive research results) from the actual operation of schooling prima facie evidence that professors and other educators do not know the research?

Without a KB, there is no profession, no expertise, and nothing much of value to profess. At issue may be more what is the KB that is professed and why what is or isn't professed than that there is no KB. That general topic area seems like a useful place to begin a discussion of education reforms.

The question of what constitutes the EDAD KB has been addressed by the University Council for Educational Administration (UCEA) in the UCEA KB Project. The project personnel developed seven Domains:

I. Social and Cultural Influences in Schooling
II. Teaching and Learning Processes
III. Organizational Studies
IV. Leadership and Management Process
V. Policy and Political Studies
VI. Legal and Ethical Dimensions of Schooling
VII. Economic and Financial Dimensions of Schooling

Yet, according to Scheurich and Laible (1995), these domains contain little of the realities of educational problems, issues, and concerns.

> . . . Nicolaides and Gaynor (1989) confirmed something close to what we have contended are the "central challenges" for schools and, thus, for administrators. They also ratify that the present knowledge base domain structure "is limited to topics and themes shaped by traditional perspectives"(p. I) and that these perspectives are inconsistent with the nature of our challenges. (p. 318).
>
> The direct implications of the conclusions of the Domain I committee, of Reyes' presidential address, of the research that shows the powerful negative effects of race, gender, and class will not be addressed by adding several more articles to the present domain structure, representative as it is of the traditional course structure of preparation programs. In short, the knowledge base project, as presently constituted and structured, moves attention back to the old, inadequate way of doing business and away from the kind of changes and leadership necessary to prepare administrators who are ready and committed to developing—collaboratively with teachers, students and parents—the kinds of schools that are equally successful for all children. (p. 318).
>
> It is not minor change that we need for our purposes; it is not the traditional course structure and focus that we need. It is a major transformation, a major realignment of our entire way of preparing educational administrators.[4] What we need is a knowledge base , a domain structure, a course structure, focused on leadership committed to all children (no exceptions allowed—by race, gender, class, or any other exclusionary category). (p. 319).

Hallinger and Heck's (1996) recent review of the principal's role in school effectiveness suggests that principals are not doing much to improve student outcomes. "It is interesting to note that the findings of these studies reveal either no effects or, at best, weak effects" (p. 20) and "with three exceptions . . . these studies found either relatively weak effects or no effects of principal leadership on school achievement" (pp. 21-22). Hallinger and Heck also cited work by Ogawa and Hart (1985) showing that the "principal variable accounted for between 2 and 8 percent ofd the variance in test scores." (p. 39 Emphasis Added). The weak results provided by Hallinger and Heck, Smylie et al. and other studies offer little solace that educators are using research that makes much difference in schooling outcomes.

A primer in much of this might be Pogrow's (1996) sharp article. His response to a critic in the 10/96 "Backtalk" of the Kappan said it well:

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"Instead of criticizing me with words, why not prove the point? Why doesn't Wilson work with a group of students in each of 20 schools and see if he can consistently produce substantial learning gains . . . If he can do that, I will apologize" (p. 180).

What is One Example of what Research Shows That works?

One example of what works to improve student achievement and development outcomes is the considerable research conducted on class size, grades K-3 and beyond, through Project STAR (Student Teacher Achievement Ratio) and STAR's subsidiary and related studies. (e.g., Finn & Achilles, 1990; Achilles, 1996 a-c; Achilles, Harman, and Egelson, 1995; See also Table 1 which contains a selected set of class-size references). Although research showed the cause-effect link between class size and student outcomes (Finn & Achilles, 1990; Word et al., 1990), of equal interest are a) the facilitative issues of small (1:15 or so) classes, b) the heuristic and social questions that his research raises, c) the addition of STAR [2] to a long list of "knowns" and common-sense indicators that "small is better" (Table 2 contains some examples of small is better), and d) the possibilities of using the results in a wide array of school-improvement efforts, including challenging much of what is now the accepted (or the usual) model of schooling in the U. S. Here is a massive challenge for educators that needs careful policy analyses and national leadership. As Sarason (1993) noted, education really has two main foci: to prevent and to remediate. while many successful projects get at remediation, STAR results provide a base for prevention, the proliferation of projects, especially when more that half of the population involved is "at risk" by some definition, turns education into a "Band Aid" process, reminiscent of an old, tired inner tube splotched with patches.

Reinventing suggests starting at the beginning or on the bottom, with a strong foundation, and building upon clear evidence of ways to improve that which is being "reinvented." Thus, an education leader will look to education's early years and attend to the many positive evaluation results of preschool projects (e.g., Abecedarian), of Head Start and of work in the early primary grades. The "reinventor" may also need to revisit some basics of the field, such as student and teacher interactions, and the number of students a teacher faces in classes (not the pupil-teacher ratio, or PTR, that often is

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[2] STAR (underlined) means STAR and STAR-related studies that are part of the total picture. Some of the studies are in Table 1.

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computes as the number of pupils divided by the number of educators -- administrators, librarians, counselors, special faculty -- in the building),

In 1995 Mosteller observed that if we are to reinvent education, people should have substantial data for data-driven decisions. He spoke of one longitudinal education experiment that could provide one useful baseline.

> Because a controlled education experiment (as distinct from a sample survey) of this quality, magnitude, and duration is a rarity, it is important that both educators and policy makers have access to its statistical information and understand its implications (p.126).

Mosteller's points are important if we believe that education should help a student improve in terms of achievement and development, and that education administrators should foster that improvement. In attempting to "restructure" or "reinvent" education, educators need to use these (and other) important research results as a base. Mitchell and Beach (1993) asked, "If restructuring is the answer, what is the problem?" (p.266).

Using as criteria for "reinventing" education such things as gain in student achievement and development, what serious studies show the benefits of current efforts or fads or bandwagons like total quality, site-based management, etc.? Professors need instead to know and to profess to preservice and inservice administrators those things (interventions, changes) that have demonstrated efficacy in student gains. If they do this, surely they will be able to show "school effects" or principal effects (See Hallinger and Heck, 1996). Here's one idea.

Project STAR: A Synopsis.

> This article briefly summarizes (STAR), a controlled experiment which is one of the most important educational investigations ever carried out and illustrates the kind and magnitude of research needed in...education to strengthen schools (Mosteller, p.113, emphasis added).

The study that was the focus of Mosteller's comments began in 1984 and its longitudinal database of over 11,000 pupils -- more if you include students from related studies -- may make STAR education's equivalent of medicine's Framingham Heart Study. Based on STAR's results, leaders in some states have enacted class-size legislation or are discussing class-size initiatives of some sort (E.g.: AZ, CA, FL, GA, IL, KY, MN, NV, NH, MN, TN, TX, UT, VA, WV, WI). Are education leaders familiar with the knowledge base driving these discussions? Are they taking part in the discussions or will this be another "Education Summit" with no educators? (Reference here is to the politico-industrial sales meeting in 1996 at IBM headquarters masquerading

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as an education summit. Here powerful representatives of technology companies sold governors and others on the "need" to spend big bucks on technology in the guise of education improvement).

STAR's in-school model and true experimental design (random assignment of pupils and teachers to classes) have provided important information about class-size effects on pupil achievement. STAR began as an experiment (1984-1990), continued as the Lasting Benefits Study (LBS) in 1989-1996, and as a policy application of experimental results in Project Challenge (1989-1996). Each school that housed a small (S) class of about 13-17 pupils also housed the control conditions of a regular (R) class of about 23-26 pupils and a regular with full-time aide (RA) class, thus controlling for building and district differences. These results, results from other studies (such as evaluations of Prime Time in TN and class-size reductions in NV), solid research on education improvements (e.g., Slavin & Madden, 1995; Slavin, Karweit & Wasik, 1993), and some harsh demographic realities (e.g., Cooley, 1993; Hamburg, 1992; Hodgkinson, 1992) have provided answers that beg new questions about the entire process of education in America today.

Samples of Outcomes That Could Provide a Basis for Reinventing

Many important questions can be at least partially answered by use of STAR and related data. What STAR data show and some applications of those data are serious contenders for building a solid foundation for "reinventing" education. Many added questions remain to be asked and answered by careful use of the substantial data base. STAR pupils are in grade 11 (Fall, 1996) and much data through grade 9 have now been analyzed Considerable data remain unanalyzed and new data should be added through grade 12. STAR results show (among other things):

Students in (S) outperformed students in (R)) and in (RA) on all measures of achievement and behavior, at all sites, and at all times.

Although all students benefit considerably from (S) as compared to (R) and (RA), minority students get greater benefits from (S) than do other students,

The (S) treatment should start as early as a student enters school, and be applied at least 3 years. The (S) benefits continue <u>at least six years</u> after the student exits the K-3 experience or the treatment (data beyond grade 9 are not yet analyzed).

The (S) treatment <u>positively</u> influences; a) retention in grade (generally a poor practice, anyway), b) gap in achievement scores of minority and non-minority pupils, c) student participation and engagement in school,

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d) teacher time on-task and pupil interactions, e) the sense of family or community, f) pupil behavior (discipline), g) early identification of pupil special needs, h) the known deleterious effects of large schools, (e.g., Fowler & Walberg 1991) on achievement.

The efficacy of heterogeneous (random) classes (K-3) and also of applying the cohort model, K-3.

The potential deleterious effects of full-time instructional aides (RA) in the K-3 experience. (At least with no training).

ETC.

World-class schools will require that world-class educators apply what controlled research and exemplary practice have shown will positively influence the desired outcomes of schooling that are defined here as improved student achievement and development. Improvement will be impeded, to put it mildly, if educators do not employ what is known, evaluate various applications, and continue to apply advances on the knowledge base. We need to start somewhere. Let's start at the bottom. Now. (Some non academic thoughts are included in "Endnotes").

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END NOTES

The social and heuristic value of the "small is better" should challenge all of us. Look both at the downside and the upside of this key idea. Both views help. Destruction of huge high-density housing projects, negative effects of large schools, unruly mob behavior, research evidence of the "behavioral sink" by Calhoun (Norway Rats) and Tinbergen (Stickleback Fish), and other indicators of harmful effects of "too big" should help educators influence new policy directions.

Family breakdown, loss of influence of other social institutions (law, religion, family), the rise of small but powerful groups (gangs?), de-massification of society and downsizing, the media and information explosions (recall that TV, once a projected savior of education, is now a key villain in reading and violence problems), the retreat from urban living, and other mega-indicators should add to the policy debate.

On the upside of the "small is better" issue are such things as discussion of small learning communities, increased student participation and school identification in small schools, school as "family," tutoring and mentoring, neighborhood in the best sense, positive small-class results, business and government ideas on "span of control" (consider that the idea now is to increase it to 1:15, and most of these people can read, feed themselves, and are toilet trained), individualization of instruction . . .

On the world-class application of the small is better idea for small people, especially, consider the Netherlands idea of schooling as a "reverse pyramid." And in the USA? Whoops!

Table 1. Samples of Studies Derived from and Building upon the STAR Initiative Classed as "Subsidiary" (directly from STAR), "Ancillary" (building on and using STAR database) and "Related" (triggered by STAR results and usually involving STAR researchers).

CATEGORY, TITLE & PURPOSE *	DATE(S)	AUTHOR(S) OR PUBLICATION
STAR (Many sources)	1985-1989	Word, et al., 1991 Finn & Achilles, 1990
Subsidiary Studies		
• Lasting Benefits Study to follow STAR pupils	1989-Present	Nye et al., 1991-1996
• Project Challenge (TN)	1989-Present	Nye et al., 1991-1996
• Participation in Grades 4, 8	1990, 1994	Finn, 1989, 1993 Voelkl, 1995 Finn, et al., 1989 Finn and Cox, 1992
Ancillary Studies (Use or extend STAR data. Some of these are dissertations.)		
• Retention in Grade	1994	Harvey, 1994
• Achievement Gap	1994	Bingham, 1993
• Value of K in Classes of Varying Sizes (test scores)	1985-1989	Nye, Achilles, Bain, 1994-1995
• School-Size and Class Size Issues	1985-1989	Nye, K., 1995
• Random v. Non-Random Pupil Assignment and Achievement	1985-1989	Zaharias, et al., 1995
• Class Size and Discipline in Grades 3,5,7	1989, 1991, 1993	In Process.
• Outstanding Teacher Analysis (top 10% of STAR teachers)	1985-1989	Bain et al., 1992
Related Studies		
• Success Starts Small: Grade 1 in Chapter 1 (1:14, 1:23) Schools,	1993-1995	Achilles et al., 1995
Burke Co., NC Study	1995	Achilles et al., 1994

* This list is not complete. It provides samples of the types of studies done. Not all authors appear in the references in the exact way listed here. This table appears in several STAR reports in substantially this same form.

Table 2.

APPENDIX A

THE PRACTITIONER AS "PROFESSIONAL EDUCATOR" *

To be thought of as "professional educators" instead of the stereotyped "schoolteachers," school leaders must enjoy (or endure) a transition from doing what we've always been taught to a level of acquiring a current and informed knowledge base of the mysteries of teaching and learning. Using data-driven analyses, school-based research methods, and sound combinations of experience, intuition, communication, and decision making enables educators to think and act as professionals. With assurance that they are *curriculum drivers* -- not passengers along for the ride -- professional educators make a difference in the quality of educational experiences for each student and for school communities collectively. At least, with equal assurance, they probably aren't harming their clients by basing decisions on nothing more than, "We've always done it this way."

Issues that affect the "professionalism" of educators often threaten the quality of the entire educational process. School leaders must battle negative student and family demographics, funding problems, values conflicts, retention, class size, instructional methods, debates, and literally dozens of other current (and eternal) wolves at the schoolhouse door. Our armor must be knowledge, for knowledge is power. The question is simple: HOW do we become "professional educators"? How do we acquire the knowledge base needed to tackle major issues?

Loosely summarized, school leaders must change their behavior through their own learning, their own communication, and their own action plans. In turn, they then perpetuate professionalism. In your study of "Issues," consider how you attack educational issues through your learning, communications, and actions. What can you substantiate or add to our profession's knowledge base? What are some of the foundations of our knowledge base? Please consider. . .

1. ***Professional behaviors convert valued theories into action.***
2. ***"Action" is a prescribed set of behaviors derived from knowledge.***
3. ***Knowledge is gained from learning, derived from purposeful communication.***
4. ***Purposeful communication questions theories, promotes change in thinking and behaviors.***
5. ***Changed behaviors move theories into action.***

ARE WE "PROFESSIONAL EDUCATORS" IF WE DON'T CHANGE BEHAVIORS?

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APPENDIX B

1. Presented Problem Situation. The problem is given to the problem-solver. It has a known formulation, known method of solution, and known answer. (This situation prevails in schools. Given that the side of a square is four feet, what is the area?) This condition is not really a problem in the sense of professional problem analysis, for essentially it only requires implementing someone else's solutions.

2. Discovered Problem Situation. A problem exists, and it is formulated by the potential problem solver, not by someone else. It may NOT have a known formulation, known method of solution, or a known solution. It meets the conditions discussed in this chapter in that it is amenable to refinement and offers a problem-finding challenge. Why do children, at about grade 3 or 4, begin to dislike school when almost all children are initially eager to attend school ? Does this American phenomenon exist in other cultures?

Excerpted from Getzels, (1979, 1985). The problem categories show differences in how the problem is formulated (and by whom), in the certainty of the method of solution, and in the complexity of the projected solution.

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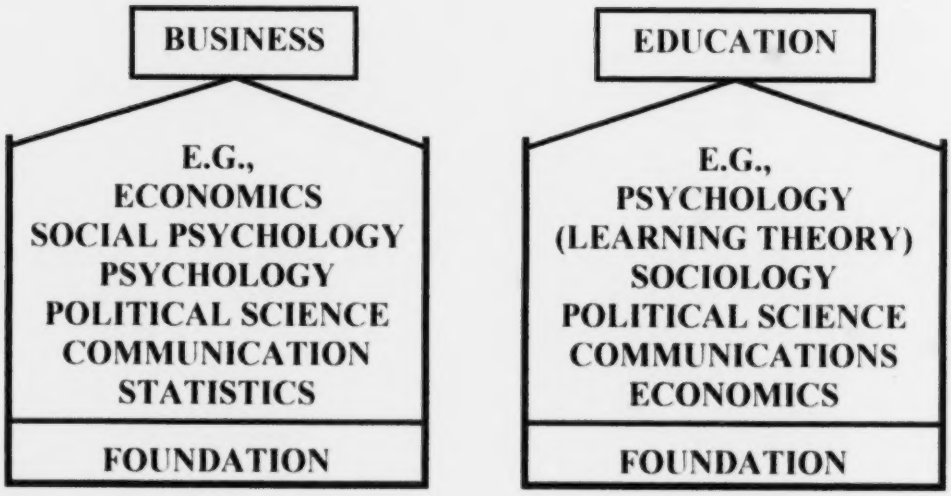
APPENDIX C

COMPARISON OF KEY ELEMENTS FOR TWO OF SOCIETY'S PRIMARY INSTITUTIONS

A. DISCIPLINES OR FOUNDATIONS FOR TWO SEPARATE INSTITUTIONS OF U.S. SOCIETY



B. GOALS FOR THE TWO SEPARATE INSTITUTIONS:

BUSINESS	EDUCATION
• PROFIT	• EDUCATED CITIZENRY
• COMPETITION	• LITERACY/VALUES
	• COOPERATION

C.
- **BUSINESS DEALS IN DOLLARS**
- **EDUCATION DEALS IN SENSE**